

Welcome to the SMaRT Station®

The Sunnyvale
Materials Recovery
and Transfer Station –
a SMaRT® approach
to reducing waste,
reusing materials,
and protecting the
environment.

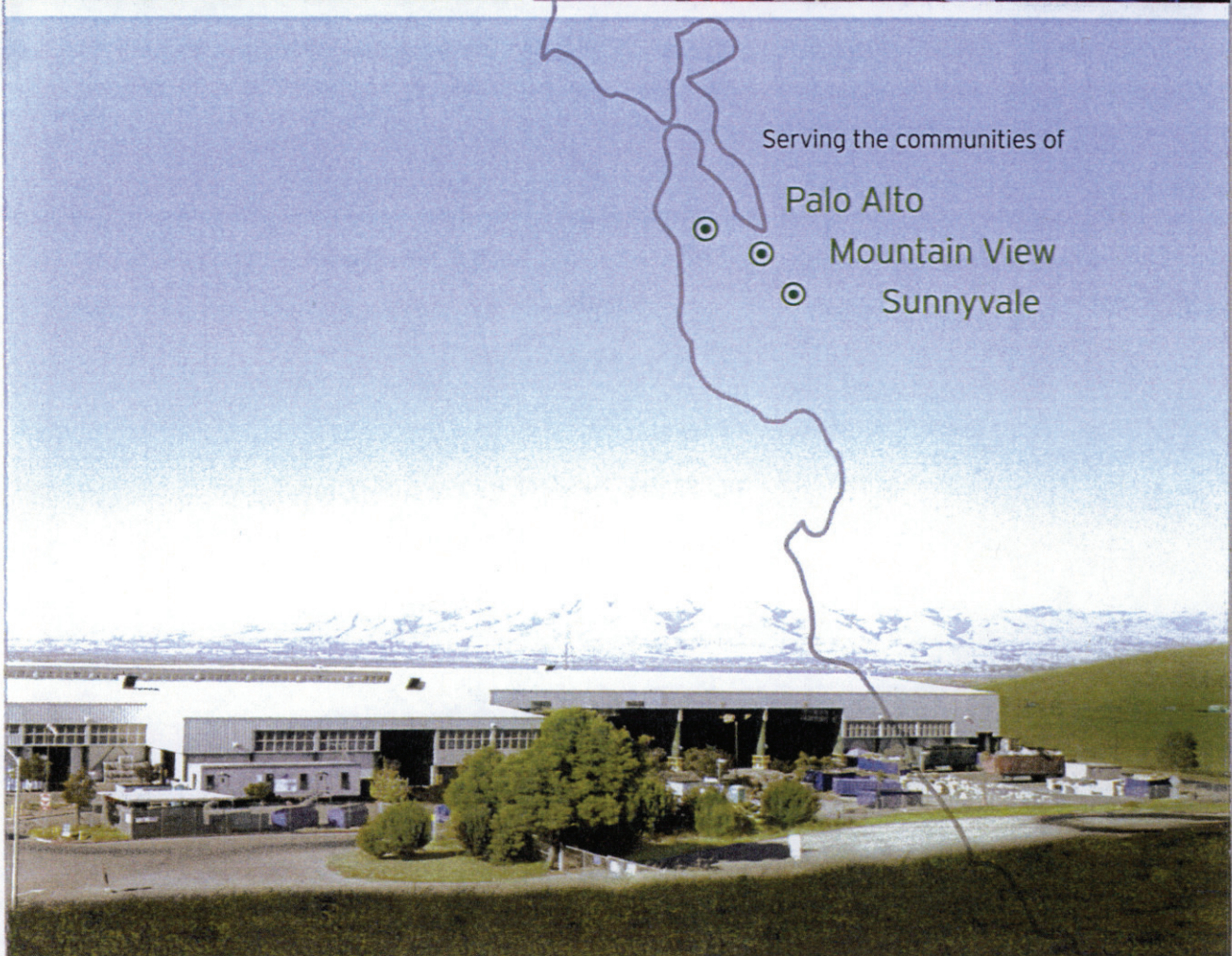


Serving the communities of

Palo Alto

Mountain View

Sunnyvale



A partnership of the cities of Mountain View,
Palo Alto and Sunnyvale operated by
Bay Counties Waste Services.



The SMaRT Station®
301 Carl Road
Sunnyvale, CA 94089

For more information
call 408.752.8530

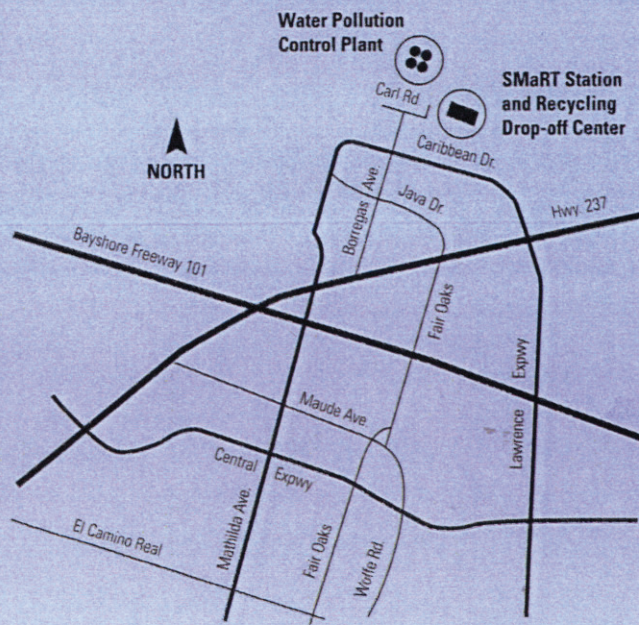


Containing 30% Post Consumer Waste
10/2009

Hours of Operation

Open to public from
8 a.m. – 5 p.m.
7 days a week

Closed Thanksgiving Day,
December 25 and January 1.



The SMaRT Station

Serving the Community in Resource Recovery

Created through a partnership between the cities of Mountain View, Palo Alto and Sunnyvale, the Sunnyvale Materials Recovery and Transfer (SMaRT) Station is one of the largest and most efficient materials recovery facilities (MRF) in the United States, with capacity to process 1,500 tons of solid waste per day. Since it began operation in October 1993, the SMaRT Station has diverted more than 514,000 tons of recyclable material that would

have otherwise ended up in the landfill.

Recovered materials from the SMaRT Station are sold to local and international markets to be converted into a variety of recycled goods and materials. The revenue produced returns to the partner cities and helps offset the cost of providing the service.

Today, the SMaRT Station stands at the forefront of sustainable waste management efforts. Its operating efficiency has attracted the attention of officials from as far away as Italy, India, South Africa and China. In 2009, the installation of new, state-of-the-art materials recovery technology allows for even greater waste diversion - providing safe, environmentally sound, and cost-effective waste management and recycling services for more than a quarter of a million residents. Now that's **SMaRT**.



SMaRT Design for Today and Tomorrow

The SMaRT Station itself features sustainable elements and is designed to serve the community for the next several decades.

- The 110,000 square foot facility on 10 acres serves a combined population of 280,000 from the cities of Mountain View, Palo Alto and Sunnyvale.
- The buildings are framed with a high percentage of recycled steel.
- In the main building, recycled content plastic was used for the partitions in locker rooms and restrooms and the floor tile is made from recycled glass and scrap tile.
- Carpets are made from recycled plastic bottles.
- Recycled water from the adjacent Sunnyvale Water Pollution Control Plant is used to flush toilets and water the landscaping.

Services Provided for Partner Cities at SMaRT

- Drop-off site for non-hazardous garbage for the cities' franchised garbage haulers and residents.
- Process and market curbside recyclable materials delivered by the cities.
- Sort, recover and sell marketable materials from the garbage delivered.
- Transfer nonrecyclable portions of garbage to Kirby Canyon Landfill.

Additional Services for the Public and Partner Cities

Recycling Drop-off Center

Residents and businesses of any community may drop off the following materials for recycling at no cost.

- Aluminum cans, foil and food containers
- Tin, steel, metal food and beverage containers
- Corrugated cardboard
- Glass bottles and jars
- Newspapers
- Mixed paper including "junk mail"
- Plastic containers #1 through #7
- Scrap metal - including metal pots and pans, small metal appliances

Beverage Container Redemption Center

Consumers can redeem and receive cash for beverage containers labeled with "California Refund Value" (CRV) or "CA Cash Refund."



E-Waste, Universal Waste, Special Products Recycling

The SMaRT Station provides a location for residents of Mountain View, Palo Alto and Sunnyvale to drop off wastes that are prohibited from being disposed in the garbage and require special handling.



- Alkaline and other household batteries
- Rechargeable batteries
- Fluorescent light bulbs and tubes
- Mercury thermometers/thermostats
- TVs, computer monitors, and electronics
- Automotive batteries
- Used motor oil and oil filters
- Antifreeze

"Sharps" Recycling

Residents of Santa Clara County may drop off the following items at the Recycling Drop-off Center. They must be placed in a specially marked red biohazard container, with a secure lid, before being placed in the bin.

- Needles
- Syringes
- Lancets

It is a violation of state law for a resident or business to place sharps in garbage or recycling containers. Improper disposal of sharps can create dangers for workers on collection routes, for sorters at the SMaRT Station and employees at landfill.

Compost and Mulch Pick-up Site

Yard trimmings collected at curbside are turned into mulch and available for pick up by residents of Mountain View, Palo Alto and Sunnyvale at no cost.

Finished compost may be available to residents of the partner cities at no cost.

Recycling... *with* Results

Since opening
in 1993, the
SMaRT Station
has processed
3.4
million tons
of material and
generated
revenue from the
sale of recyclable
material.

As of 09/2009 figures



The SMaRT Station helps protect the environment by taking reusable material out of the garbage

While the SMaRT Station is located near the site of the closed Sunnyvale landfill, it is NOT a landfill. It is a sorting and transfer station. All material that arrives here will leave again. In fact, its purpose is to prevent valuable resources from ending up in the landfill – and to provide services that encourage conservation, waste reduction and recycling.

Curbside Recycling

At the SMaRT Station, processing recyclables prevents waste from ending up at the landfill. Every bottle, can, jar, piece of cardboard, junk mail or newspaper that residents of the partner cities keep out of their garbage and set out for curbside recycling reduces the amount of trash that ends up at the landfill. The recyclable materials that are collected curbside from the partner cities are received and prepared to ship to market.

Yard Trimming Recycling

Yard trimmings often make up 20-30% of a typical household's weekly trash. Recycling yard clippings significantly decreases the volume of garbage. Yard clippings are processed at the SMaRT Station and shipped to a composting facility.

Materials Recovery from Garbage

Recyclable material is also pulled from garbage brought to the SMaRT Station (see *Inside the Materials Recovery Process*).

By serving both the community and the environment, the SMaRT Station plays a critical role in meeting state waste diversion mandates while laying the groundwork for a more sustainable future.

Going to Market

By selling recovered materials,
the SMaRT Station delivers real
value to the partner communities

Recyclable materials recovered from garbage by the sorting process are combined with other recyclables collected in the curbside and commercial recycling programs. These materials are sent to markets through brokers, or directly to mills and manufacturers for reuse.

Each type of recyclable material is compacted into bales and shipped to manufacturers in the U.S. and overseas that convert these "used" commodities into new glass and plastic containers, paper products, and a wide variety of other useful recycled goods.

We encourage residents and businesses to "buy recycled" to help maintain strong demand for products with recycled content.



SMaRT FACTS

Economy of Scale

Approximately \$25 million were initially invested by the cities of Mountain View, Palo Alto and Sunnyvale to develop and construct the SMaRT Station. An innovative partnership between the three cities provides each with a long-term solution for solid waste management at a significantly lower cost than it would for the cities to run comparable individual programs.



Collaborative Management

The SMaRT Station has been operated by Bay Counties Waste Services since January 1, 2008. The owner of the facility, the City of Sunnyvale, provides an on-site liaison with the contract operator. Cities contribute to the operational budget in proportion to the amount of refuse each city delivers and receive revenues from the sale of recyclables to offset their costs.



Alternatives to Local Landfills

For Mountain View and Sunnyvale, the SMaRT Station and the disposal contract with Kirby Canyon Landfill completely replace city-owned landfills that are now closed. Palo Alto will continue to operate and dispose of a small amount of waste at their landfill until 2010-2011.



Helps Meet State Law

In conjunction with the curbside and commercial recycling programs, the SMaRT Station is a key element for all three cities in meeting and exceeding the waste diversion mandates of the California Integrated Waste Management Board.

Inside the Materials Recovery Process

The SMaRT Station is able to divert up to 25% of all garbage received from Mountain View, Palo Alto and Sunnyvale. Here's how:

Garbage Pre-sort

1

Each day, hundreds of incoming loads of garbage are dumped onto the tipping floor. Heavy materials are removed and the rest of the waste stream is conveyed up to an enclosed pre-sort room.



2

During the pre-sort, the waste stream is visually scanned by workers who remove bulky items, and drop them into chutes for recycling.



3

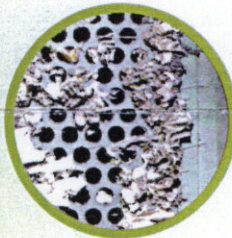
After the pre-sort the remaining waste is fed into a set of trommels – 70 foot long rotating drums containing screens to separate objects of different sizes. The trommels are equipped with knives to break open bags so materials can be separated.



Trommel Separation

4

The first set of screens separates "fines" through 2-inch holes. These fines pass under a magnet that captures ferrous materials and are transported by a series of conveyors into storage containers located outside the building. The fines, which are rich in organic material, are transported to an off-site facility for composting.



5

A second set of screens separates material between 2 and 9 inches. This material is conveyed to the primary disc screen (480 discs on 30 rotating shafts) to separate materials smaller than 5 inches (i.e. cans) from flat materials (i.e. paper and cardboard). Smaller materials drop down to magnets that pull steel cans and ferrous metals. Eddy-current separators repel and remove the aluminum cans.



Post-sort

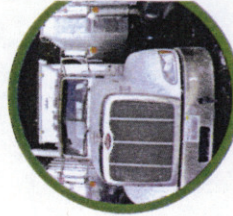
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The larger material that does not pass through the trommel screen holes, called "overs" (materials over 9 inches such as wood, corrugated cardboard and mixed paper), is fed to conveyors where recyclables are manually removed by sorters.

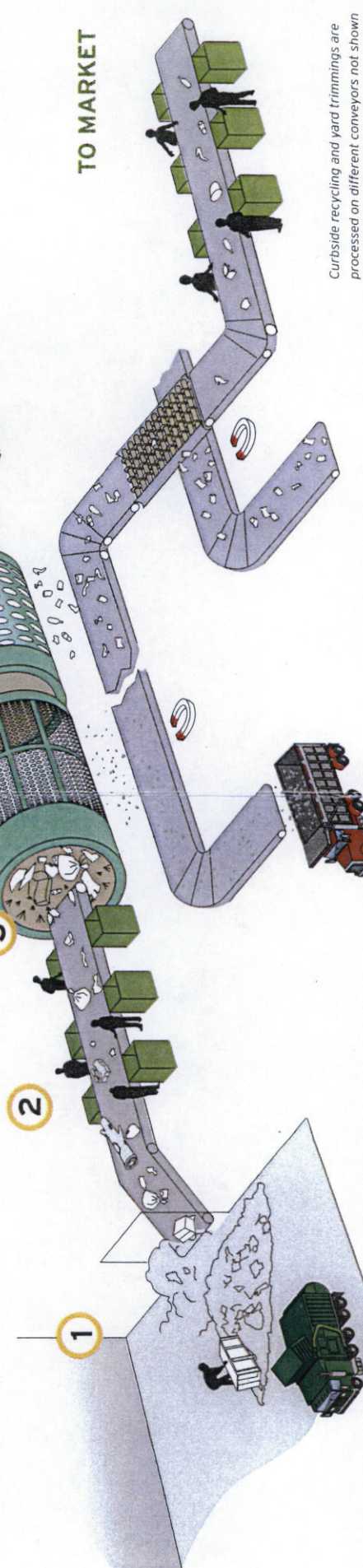


TO LANDFILL

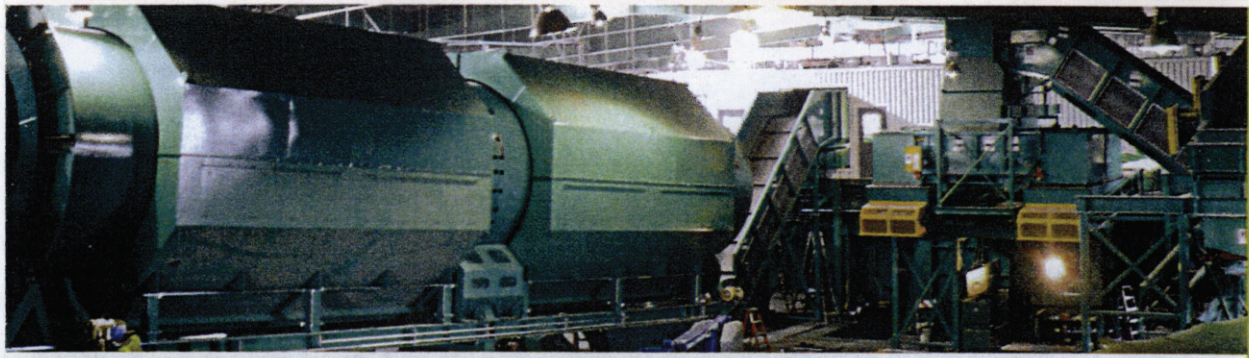
Residue materials that are not recovered for recycling are moved by a 450-foot conveyor to be loaded onto a tractor-trailer transfer truck, compacted into a 23-ton bale, and delivered to the Kirby Canyon Landfill, 27 miles southeast of Sunnyvale. In a typical weekday, 30-40 loads are transferred to the landfill.



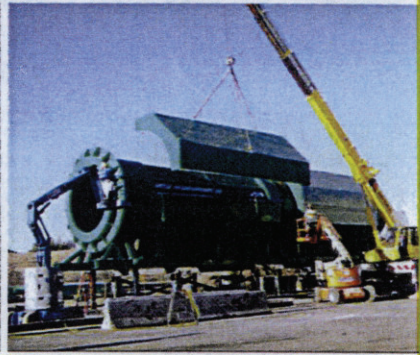
TO MARKET



Curbside recycling and yard trimmings are processed on different conveyors not shown



Palo Alto, Mountain View and Sunnyvale A SMaRT Partnership



Improving the Way Materials Are Managed

In September 2009, the City of Sunnyvale completed a three-year, \$14.6 million project to renovate and upgrade the Materials Recovery Facility (MRF) processing equipment. The new MRF design incorporated additional automated equipment that separates garbage by size and type to streamline the sorting process. This will increase efficiency, enable additional diversion from the landfill and decrease the need for manual sorting.

Garbage collected from partner cities' residents and businesses feeds into two trommels, 70-foot-long rotating drums, equipped with blades that break open plastic trash bags to screen and separate objects in the waste stream according to size.

- Small MRF "fines", rich in organic material, fall through two-inch holes and are sent off-site for composting.
- Larger materials, between two and nine inches in size, fall through larger holes and are further separated by rotating disk screens.
- Smaller material from the disk screens travels to magnets and eddy-current separators that remove steel and aluminum cans and ferrous metals.

Conveyors transport remaining large items to sorting staff who manually remove additional recyclables.

The new MRF equipment is expected to increase waste diversion to 25% or more, increase revenues from the sale of recyclables and decrease landfill disposal costs. The project's net benefit to the cities is estimated at \$18.5 million over a 15-year period. The SMaRT Station investment affirms the commitments of Sunnyvale, Palo Alto and Mountain View to sustainability and advance shared Zero Waste goals.



SMaRT Station Highlights

Open House

An Open House celebration was held in October 2009 to showcase the new MRF equipment. Over 100 staff and elected officials from the partner cities attended along with representatives of other local jurisdictions. After presentations from Sunnyvale's Public Works Director, Marvin Rose, Mayor Margaret Abe-Koga (City of Mountain View) and Mayor Peter Drekmeier (City of Palo Alto), guests viewed the new SMaRT Station video and took tours of the new MRF.



SMaRT Station Landscape Gets a Native Plant Makeover

A landscape refurbishment project included the installation of native plants, sheet mulching to reduce weed growth, the removal of 2,000 square feet of turf grass, the use of compost and mulch generated on site, removal of non-native invasive plants, a demonstration garden, and below-ground drip irrigation.

The goal of the project was to reduce water use, minimize maintenance costs and enhance the local ecosystem by using plants that are native to the region. City staff wrote specifications that required the contractor to use Bay-Friendly Gardener or Santa Clara Valley Green Gardener guidelines that support the integrity of the San Francisco Bay watershed ecosystem.

Challenges

For the past 16 years, the SMaRT Station has helped the SMaRT Cities meet the diversion challenges of a changing waste stream. Declining waste volumes, particularly in the commercial and construction sectors, challenged the SMaRT operator to mine deeper for recyclables from incoming solid waste. Despite the 10% decrease in Municipal Solid Waste (MSW) feed stock, the SMaRT Station diverted 13% of MSW destined for the landfill during the ten months of full MRF operation in 2009-2010. The SMaRT Station will continue to play a significant role as the cities move toward Zero Waste.

Financial Summary 2009-2010

| (in thousands) | Mtn. View | Palo Alto | Sunnyvale | Totals |
|-------------------------------------|----------------|----------------|----------------|-----------------|
| Population by City | 75,787 | 61,200 | 140,450 | 277,437 |
| Cost Sharing Percentage | 32% | 18% | 50% | |
| COSTS | | | | |
| Operating costs | \$3,865 | \$2,185 | \$6,065 | \$12,115 |
| Landfill Fees and Taxes | \$2,790 | \$1,752 | \$5,127 | \$9,669 |
| Yardwaste Recycling costs | \$181 | \$11 | \$435 | \$627 |
| Capital Replacement Fund | \$77 | \$70 | \$182 | \$329 |
| Host Fees to General Fund | \$202 | \$114 | \$307 | \$623 |
| Total Costs | \$7,115 | \$4,132 | \$12,116 | \$23,362 |
| REVENUES | | | | |
| MRF Recovered Recycling Revenues | \$446 | \$252 | \$701 | \$1,399 |
| Source Separated Recycling Revenues | \$1,334 | \$0 | \$1,719 | \$3,053 |
| Public Haul Fees collected | \$118 | \$67 | \$184 | \$369 |
| Total Revenues | \$1,898 | \$319 | \$2,604 | \$4,821 |
| NET COSTS | \$5,217 | \$3,813 | \$9,512 | \$18,541 |

SMaRT Station Diversion 2009-2010

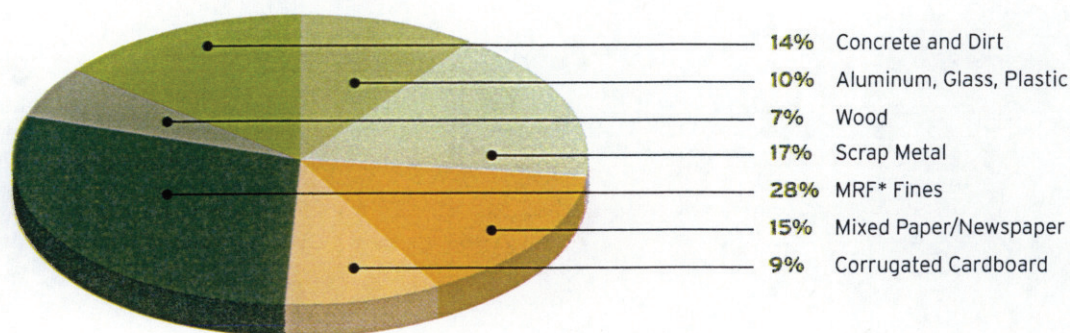
| (in tons) | Mtn. View | Palo Alto | Sunnyvale | Totals |
|---|---------------|---------------|---------------|----------------|
| City Population | 75,787 | 61,200 | 140,450 | 277,437 |
| MSW* delivered to SMaRT Station | 53,830 | 30,441 | 84,517 | 168,788 |
| MSW Public haul | 1,271 | 345 | 7,649 | 9,265 |
| Total MSW Delivered to SMaRT | 55,101 | 30,786 | 92,166 | 178,053 |
| MSW disposed at landfill | 49,425 | 27,950 | 77,601 | 154,976 |
| MSW material diverted from the landfill at the SMaRT Station | 5,676 | 2,836 | 14,565 | 23,077 |
| Yard trimmings brought to SMaRT Station | 6,552 | 391 | 15,695 | 22,638 |
| Recyclables brought to SMaRT Station | 9,135 | 0 | 11,078 | 20,213 |
| Total Delivered | 70,788 | 31,177 | 118,939 | 220,904 |
| Total amount of material delivered to the SMaRT Station and diverted from the landfill | 21,363 | 3,227 | 41,338 | 65,928 |

* MSW = Municipal Solid Waste

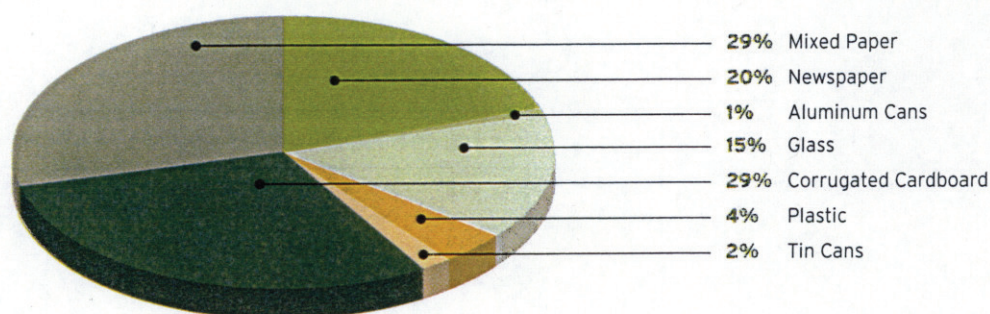


Toward Marketing Success!

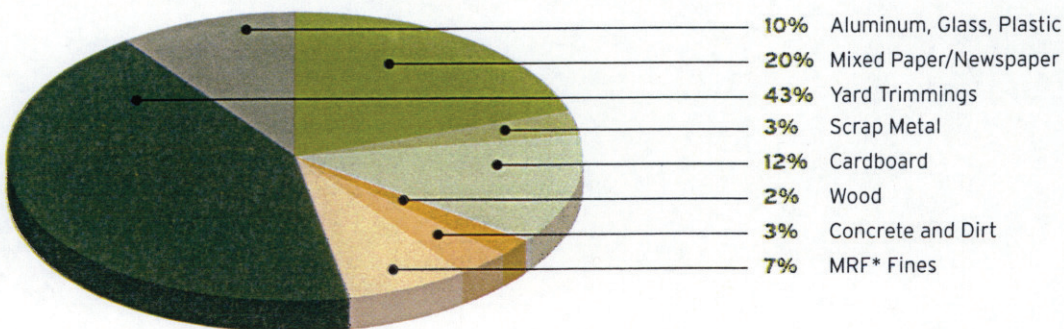
Materials Diverted from MSW



Materials Marketed from Curbside Collection



SMaRT Station All Materials Marketed



* MRF fines are mostly organic material, smaller than two inches, that has fallen through the trommel screens. The fines are processed into commercial grade compost.

Partners in Leadership

CITY OF SUNNYVALE

Mayor Melinda Hamilton
Vice Mayor Christopher R. Moylan
Councilmember Ron Swegles
Councilmember
Anthony "Tony" Spitaleri
Councilmember David Whittum
Councilmember Dean J. Chu
Councilmember Jim Griffith

CITY OF PALO ALTO

Mayor Patrick Burt
Vice Mayor Sid Espinosa
Councilmember Karen Holman
Councilmember Larry Klein
Councilmember Greg Scharff
Councilmember Greg Schmid
Councilmember Nancy Shepherd
Councilmember Gail Price
Councilmember Yiaway Yeh

CITY OF MOUNTAIN VIEW

Mayor Ronit Bryant
Vice Mayor Jac Siegel
Councilmember Margaret Abe-Koge
Councilmember John Inks
Councilmember
R. Michael Kasperzak, Jr.
Councilmember Laura Macias
Councilmember Tom Means